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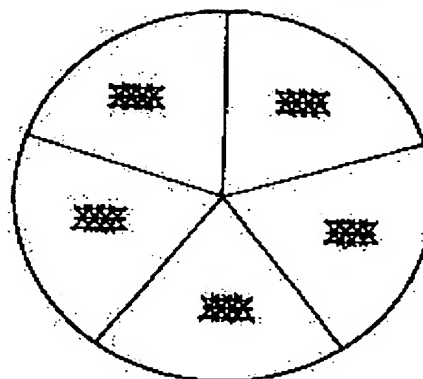
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(54) HEAT AND SHOCK RESISTANT, REVOLVING AND HEAT-REGENERATING TYPE CERAMIC HEAT EXCHANGER BODY AND ITS MANUFACTURING

(57)Abstract:

PURPOSE: To obtain product of high efficiency and of less pressure loss thru a method wherein matrix segments of honey-comb structure are jointed employing jointing material of the same mineral composition but small in thermal expansion difference between the two, and restricting the thickness at jointing part within a specified range.

CONSTITUTION: Thru the extruded shaping of the ceramic material such as cordierite whose thermal expansion rate is comparatively low, matrix segments of honey-comb structure of cell form such as triangle, square and the like are formed and solidified by sintering. A plurality of the formed segments are jointed, solidified by sintering and heat exchanging body of a unitary structure is formed. The ceramic jointing material to be employed is of a nature such that the composition thereof after sintering is the same with the matrix segment, the thermal expansion difference between the two at 800° C is below 0.1%, and the thickness of the jointing material to be painted at the jointing portions is to be 0.1W6mm after sintering. Thru the above mentioned manufacturing method, a heat exchanger of high efficiency and of less pressure loss is obtained.



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